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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,700	09/29/2003	Raymond Paul Covit	088141.00001	4173
34261	7590	04/20/2005	EXAMINER	
HOLLAND & KNIGHT LLP 633 WEST FIFTH STREET, TWENTY-FIRST FLOOR LOS ANGELES, CA 90071-2040			TRAN, BINH Q	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/673,700	COVIT, RAYMOND PAUL	
	<b>Examiner</b>	<b>Art Unit</b>	
	BINH Q. TRAN	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 December 2004 and 11 January 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-21, 23-24, 26-57 is/are allowed.
- 6) ☒ Claim(s) 1-5, 22 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

This office action is in response to the amendment filed December 13, 2004, and January 11, 2005.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claims 1-3, 22, and 25 are rejected under 35 U.S.C. 102 (b) as being anticipated by Martin et al. (Martin) (Patent Number 6,003,305).***

Regarding claims 1, and 22, Martin discloses a catalytic converter (e.g. 10a) assembly for use in an exhaust purification system for a diesel or other compression ignited engine (e.g. 12) to remove particulate and gaseous pollutants therefrom, said assembly comprising: a housing (e.g. 10a) defining an exhaust inlet (17) and an exhaust outlet (19); an catalytic element (e.g. 14a, 31) disposed within said housing between said inlet and said outlet such that upon communicating said inlet with the engine exhaust, the exhaust passes through said housing about said catalytic element (e.g. See col. 8, lines 25-65); and a heating assembly (e.g. 28, 29, 44, 45) associated with said housing for heating the exhaust flowing through said housing between said inlet and said catalytic element to a temperature sufficient to initiate a catalytic reaction between the exhaust and said catalytic element and to incinerate particulate pollutants in the exhaust prior to said

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particulate pollutants contacting said catalytic element (e.g. See col. 9, lines 10-67; col. 10, lines 1-67; col. 11, lines 1-34).

Regarding claim 2, Martin further discloses that the heating assembly provides one or more flames within said housing for igniting gaseous pollutants in the exhaust and raising the temperature in said housing between said inlet and said catalytic element to enhance the efficiency of said heating element (e.g. See col. 9, lines 10-67; col. 10, lines 1-67; col. 11, lines 1-34).

Regarding claim 3, Martin further discloses that the catalytic element comprises pellets containing palladium (e.g. See col. 9, lines 10-67; col. 10, lines 1-67; col. 11, lines 1-34).

Regarding claim 25, Martin further discloses that the igniter includes a spark plug and means for activating said spark plug (e.g. See col. 15, lines 63-67; col. 16, lines 1-8).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

***Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin in view of design choice.***

Regarding claims 4-5, Martin discloses all the claimed limitation as discussed above except that the heating assembly heats the exhaust to a temperature of at least about 575 °F.

Regarding the specific range of the heated exhaust gas temperature, it is the examiner's position that a range of at least about 575 °F of the heated exhaust gas temperature, would have been an obvious matter of design choice well within the level of ordinary skill in the art, depending on variables such as mass flow rate of the exhaust gas, as well as the size of the engine, properties of materials for making the catalyst, and the controlled temperature of the catalytic converter. Moreover, there is nothing in the record which establishes that the claimed parameters present a novel or unexpected result (See *In re Kuhle*, 562 F. 2d 553, 188 USPQ 7 (CCPA 1975)).

Under some circumstances, however, changes such as these may impart patentability to a process if the particular ranges claimed produce a new and unexpected result which is different in kind and not merely in degree from the results of the prior art. *In re Dreyfus*, 22 CCPA (Patents) 830, 73 F.2d 931, 24 USPQ 52; *In re Waite et al.*, 35 CCPA (Patents) 1117, 168 F.2d 104, 77 USPQ 586. Such ranges are termed "critical" ranges, and the applicant has the burden of proving such criticality. *In re Swenson et al.*, 30 CCPA (Patents) 809, 132 F.2d 1020, 56 USPQ 372; *In re Scherl*, 33 CCPA (Patents) 1193, 156 F.2d 72, 70 USPQ 204. However, even though applicant's modification results in great improvement and utility over the prior art, it may still not be patentable if the modification was within the capabilities of one skilled in the art. *In re Sola*, 22 CCPA (Patents) 1313, 77 F.2d 627, 25 USPQ 433; *In re Normann et al.*, 32 CCPA (Patents) 1248, 150 F.2d 627, 66 USPQ 308; *In re Irmischer*, 32 CCPA (Patents) 1259, 150 F.2d 705, 66 USPQ 314. More particularly, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Swain et al.*, 33 CCPA (Patents) 1250, 156 F.2d 239, 70 USPQ 412; *Minnesota Mining and Mfg. Co. v. Coe*,

69 App. D.C. 217, 99 F.2d 986, 38 USPQ 213; Allen et al. v. Coe, 77 App. D.C. 324, 135 F.2d 11, 57 USPQ 136.

### ***Allowable Subject Matter***

Claims 6-21, 23-24, and 26-57 are allowed.

Since allowable subject matter has been indicated, applicant is encouraged to submit formal drawings in response to this Office action. The early submission of formal drawings will permit the Office to review the drawings for acceptability and to resolve any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the issue process.

### ***Response to Arguments***

Applicants's arguments filed December 13, 2004, and January 11, 2005 have been fully considered but they are not deemed persuasive in part. ***Claims 1-57 are pending.***

Applicant's cooperation in amending the claims to overcome the claim rejections is appreciated.

Applicants have argued that Martin does not teach or suggest Applicant's claimed invention. More specifically, Applicants assert that the reference to Martin fails to disclose a catalytic converter, and pellets of palladium. The examiner respectfully disagrees, in column 9, lines 10-37; and column 20, lines 34-49, Martin has clearly disclosed that "*Heater 28 may comprise an electric arc ignitor, a catalytic section 31 (discussed herein below) or, ... Although catalysts are generally ill-suited for use with gases containing soot (as described above), a catalyst may be employed in a low temperature region of the thermal oxidizer to ignite process stream 9 to form*

*reaction wave 8 while diminishing the chances of thermal deactivation of the catalyst. Specifically, a catalytic section 31 may be positioned proximate the inlet of matrix 14a. The reaction wave 8 may form downstream from catalytic section 31, thereby enabling catalytic section 31 to maintain a temperature below the maximum operating temperature limit of the catalyst. Catalytic section 31 may be formed by a conventional catalytic material, such as a noble metal catalyst, disposed on a media. The catalyst may be of the type for catalyzing the reactions of carbon monoxide and unburned hydrocarbons with oxygen, as will be understood to those familiar with such catalysts“ and “In yet another aspect of the present invention, an SCR system 76 is disposed on the downstream end of flameless thermal oxidizer 10a,b,c,d,e,f, as shown in FIG. 1. SCR system 76 preferably comprises a conventional SCR-type catalyst and a system to inject a reductant such as ammonia. SCR system 76 comprises a discrete device, as well as a catalytic material disposed within outlet plenum 18a,b, outer plenum 68, or within a separate zone within the matrix shell. Employing flameless thermal oxidizer 10a,b,c,d,e,f upstream of SCR system 76 is especially advantageous for an engine exhaust stream 3 that contains a high soot content, which might otherwise foul or poison the catalyst. The present invention encompasses a system comprising a combination of flameless thermal oxidizer 10a,b,c,d,e,f with SCR system 76, as well as the corresponding method of reducing pollutant emissions by such combined system.”. It is well understood that noble metal catalyst contains palladium catalyst; and accordingly Martin has clearly disclosed the above rejected claims.*

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.



*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Binh Tran whose telephone number is (571) 272-4865. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reach on (571) 272-4859. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BT  
April 16, 2005



Binh Q. Tran  
Patent Examiner  
Art Unit 3748